

raised pH under conditions sufficient to permit said at least one plant to accumulate said at least one metal from the soil in above-ground tissue, wherein the at least one metal-hyperaccumulator plant is selected from the group consisting of nickel-hyperaccumulator plants that accumulate at least about 1000 mg of nickel per 1 kg dry weight of plant tissue, cobalt-hyperaccumulator plants that accumulate at least about 1000 mg of cobalt per 1kg dry weight of plant tissue, zinc-hyperaccumulator plants that accumulate at least about 10,000 mg of zinc per 1 kg dry weight of plant tissue, manganese-hyperaccumulator plants that accumulate at least about 10,000 mg of manganese per 1 kg dry weight of plant tissue, and cadmium-hyperaccumulator plants that accumulate at least about 100 mg of cadmium per 1 kg dry weight of plant tissue.

10 (Amended). A method for recovering nickel from nickel-containing soil comprising:

- (a) elevating the pH of the soil from an initial pH to a raised pH of 5.6 to 9.5; and
- (b) cultivating at least one nickel-hyperaccumulator plant in the soil having the raised pH under conditions such that at least 0.1% of the above-ground tissue of said at least one plant, on a dry weight basis, is nickel;
- (c) harvesting said at least one plant; and
- (d) recovering nickel from said harvested plant.

38 (Amended). A method for decontaminating metal-containing soil, comprising cultivating at least one hyperaccumulator plant in metal-containing soil, whereby the concentration of metal in the above-ground plant tissue of said at least one hyperaccumulator plant exceeds the concentration of metal in said soil by a factor of at least 2;

D3 wherein the at least one metal-hyperaccumulator plant is selected from the group consisting of nickel-hyperaccumulator plants that accumulate at least about 1000 mg of nickel per 1 kg dry weight of plant tissue, cobalt-hyperaccumulator plants that accumulate at least about 1000 mg of cobalt per 1 kg dry weight of plant tissue, zinc-hyperaccumulator plants that accumulate at least about 10,000 mg of zinc per 1 kg dry weight of plant tissue, manganese-hyperaccumulator plants that accumulate at least about 10,000 mg of manganese per 1 kg dry weight of plant tissue, and cadmium-hyperaccumulator plants that accumulate at least about 100 mg of cadmium per 1 kg dry weight of plant tissue.

[Please add new claim 49 as follows.]

49 (New). A method for selectively increasing the amount of at least one metal recovered from metal-containing soil comprising:

- D4
- (a) elevating the pH of the soil from an initial pH to a raised pH of at least 5.6; and
 - (b) cultivating at least one metal-hyperaccumulator plant in the soil having the raised pH under conditions sufficient to permit said at least one plant to accumulate said at least one metal from the soil in above-ground tissue,